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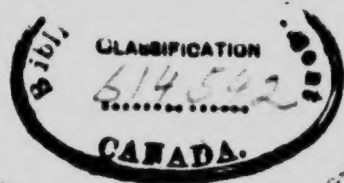
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REPRINT No. 35.

From THE BRITISH JOURNAL OF TUBERCULOSIS.

Edited by T. N. KELYNACK, M.D., M.R.C.P.



THE ANTI-TUBERCULOSIS MOVEMENT IN CANADA

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CANADA lacks a uniform system of registration of vital statistics. It is impossible, therefore, to give a complete return regarding the morbidity and mortality from tuberculosis.

General Considerations.

The province of Ontario has for many years had satisfactory registration, but the other provinces of the Dominion have been slow to imitate in this respect.

Our principal information with regard to numbers is contained in the decennial census returns, the last of which was taken in 1901. From this I have prepared the table on p. 2.

The rate of mortality, as shown in the table is seen to vary considerably in the different provinces. The rate for all Canada is practically identical with that in England and Wales for the same period.

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TABLE INDICATING DEATHS FROM TUBERCULOSIS IN THE PROVINCES OF CANADA, BASED ON THE RETURNS IN THE CENSUS OF 1901.

Province.	Deaths.		Deaths per 100,000 Population.	Total Population.
	Male.	Female.		
British Columbia	171	115	160	178,657
Manitoba	167	215	149	255,211
New Brunswick	266	273	163	331,120
Nova Scotia	451	400	198	459,574
Ontario	1,593	1,951	162	2,182,947
Prince Edward Island	105	119	217	103,259
Quebec	1,391	1,982	205	1,648,898
Territories	187	213	252	158,940
Unorganized Territories	33	17	95	52,709
All Canada	4,364	5,345	180	5,371,315

TABLE INDICATING COMPARATIVE MORTALITY FROM TUBERCULOSIS.

Country.	Year.	Deaths from Tuberculosis (all forms) per 100,000 Population.	Deaths from Tuberculosis (all forms) per 1,000 Deaths.
England and Wales	1901	180.5	106.7
United States Registration Area	1901	196.9	118.9
Massachusetts	1901	234.5	138.2
CANADA	1901	180.0	119.6

Canada's death-rate from pulmonary tuberculosis, as compared with that in other countries, is shown in the following table :

TABLE INDICATING DEATHS IN VARIOUS COUNTRIES FROM TUBERCULOSIS OF THE LUNGS PER 100,000 POPULATION: ANNUAL AVERAGE 1901-1905.

Australia	88.9	Norway	196.4
Austria	334.8	Servia	279.7
Belgium	118.2	Spain	147.8
CANADA (1901)	153.0	Switzerland	188.6
Ceylon	93.0	United Kingdom	133.8
German Empire	185.8	England and Wales	121.5
Jamaica	153.7	Scotland	144.5
Japan	146.3	Ireland	215.3
Netherlands	133.4	United States (registration area)	160.9

A study of the deaths from tuberculosis in age periods shows what an appalling percentage of our citizens are carried off by this disease, especially during the working period of life—namely, from 15 to 44 years, and particularly in the periods 15 to 24 years and 25 to 34 years. In the United States the age period 15 to 29 years shows

33.2 per cent. of all deaths to be due to tuberculosis, and the period 30 to 44 years 25.6 per cent. In Canada, 40 per cent. of all deaths occurring between 15 and 34 years of age are due to tuberculosis, as shown in subjoined table :

TABLE INDICATING DEATH-RATE FROM TUBERCULOSIS I. CANADA AT VARIOUS AGES.

<i>Age Period.</i>	<i>Deaths from all Causes.</i>	<i>Deaths from Tuberculosis.</i>	<i>Deaths from Tuberculosis per 1,000 Deaths from all Causes.</i>
Under 1 year... ..	21,328	564	119.6
1 to 4 years... ..	10,019	629	62.8
5 " 14 " " " " " " "	3,160	759	147.1
15 " 24 " " " " " " "	6,088	2,512	412.8
25 " 34 " " " " " " "	5,324	2,110	396.5
35 " 44 " " " " " " "	4,672	1,275	272.9
45 " 54 " " " " " " "	4,527	828	182.9
55 " 64 " " " " " " "	5,406	543	100.4
65 " 74 " " " " " " "	7,482	349	46.7
75 and over " " " " " " " "	10,877	116	10.7

The tables which are now presented give an idea of the extent of tuberculosis in Canada—the problem with which we must deal.

The Anti-Tuberculosis Movement in Canada.

During the past ten years the movement in Canada against tuberculosis has been gradually growing. At first activity was manifest in only a few centres, but now action is being taken in every province. Fostered by the Canadian Association for the Prevention of Tuberculosis and its affiliated societies, there has been a notable increase in activity, especially marked during the past two years. An additional impetus was given by the meeting of the International Congress in London, in October, 1908, which was attended by physicians, government officials, and laymen from every province in the Dominion.

Control of tuberculosis in Canada would be a much more simple matter were it a question which could be controlled by the Federal Government and the whole matter dealt with as a national problem; but under the provisions of the British North America Act, the control of public health matters in general—of hospitals, asylums, etc.—is delegated to the various provinces. The importance of Federal jurisdiction in this matter has not as yet sufficiently impressed itself upon our legislators for them to devise measures to overcome this difficulty. Hence in Canada we have to look to the Provincial Legislatures to deal with the problem, and by wise legislation to encourage the municipalities and private philanthropy to take up their share of the problem.



MUSKOKA COTTAGE SANATORIUM: ADMINISTRATION BUILDING.



KING EDWARD SANATORIUM FOR CONSUMPTIVES, NEAR TORONTO:
MULLHOLLAND BUILDING FOR ADVANCED CASES.

Federal Measures.

That with the Federal Government there is a growing sympathy with anti-tuberculosis work was shown by the debate in the House in December, when the greater part of a day was taken up with a discussion of the work being done by the Canadian Association for Prevention of Tuberculosis and its affiliated societies. For some years the Government have voted \$5,000 to this Association—a small amount, it is true, but such as at least shows some appreciation of responsibility in the matter.

Tuberculosis in Immigrants.

Immigrants evidently tuberculous are not allowed to land in Canada, and any immigrant becoming a public charge within three years may be deported. These provisions are being strictly enforced.



THE LAKE EDWARD SANATORIUM, LAKE EDWARD, QUEBEC.

Tuberculosis in Indians.

The Indians are the wards of the Federal Government. There are now some 375 bands, with a population of 110,000. The death-rate is two to three times that of the general population, the excessive mortality being due principally to tuberculosis. The Department of Indian Affairs has installed a tent-hospital, in charge of a trained nurse, on a number of the reserves. Indian industrial and boarding schools as sources of infection are receiving the attention of the Chief Medical Health Officer.

Tuberculosis in Animals.

The import and export of animals is under the charge of the Federal authorities, and, by consent of the provinces, they also control disease in animals. All cattle imported for breeding purposes, or for milk production are tuberculin-tested in quarantine, unless bearing a certificate from a proper officer of the country from which imported.

Provincial Enactments for the Prevention and Arrest of Tuberculosis.

Most of the provinces have enacted special legislation regarding tuberculosis. It will be well to summarize some of the more important features :

Compulsory notification in Alberta, British Columbia, Quebec, Saskatchewan, though enacted, is not yet strictly enforced.

Notification of change of residence is enforced in Alberta.

Disinfection in case of removal or death is enforced in Alberta, British Columbia, Quebec, Saskatchewan.



THE MOUNTAIN SANATORIUM : MAIN BUILDING.

Containing staff quarters; also patient's dining-room and kitchen.

Anti-spitting legislation has been introduced in British Columbia, Quebec, Nova Scotia.

Free Examination of Sputum in Provincial Laboratory.—All the provinces, excepting perhaps New Brunswick and Prince Edward Island, have made arrangements for this essential step in the recognition of consumptives.

Admission of Tuberculous Patients into General Hospitals.—When no special hospital for tuberculosis patients exists, British Columbia requests that all general hospitals shall care for such patients. In Alberta and Saskatchewan this is obligatory upon the general hospital if receiving Government assistance. The Government will aid in erection of special wards or pavilions for these patients.

Assistance in Erecting Sanatoriums.—British Columbia has voted sums totalling \$50,000 to the Provincial Association for their building fund. Ontario will contribute (up to \$4,000) one-fifth the cost of a sanatorium erected by any municipality or recognized association. This aid has been given to some seven sanatoriums. In 1906 the Legislature voted \$15,000 to the Muskoka Free Hospital for Consumptives. Quebec has granted two sites—one of 400 acres and one of 137 acres—for sanatorium purposes. Nova Scotia has erected a Provincial Sanatorium of twenty-five beds at Kentville.



THE MOUNTAIN SANATORIUM: WOMEN'S SHACK.

Accommodating twelve patients. Cost \$2500.

Assistance in Maintenance.—British Columbia gives a *per diem* grant of fifty cents to all patients in sanatoriums and special hospitals. Ontario grants \$3.00 per week to all patients in sanatoriums who contribute not over \$4.90 per week. This has amounted to \$87,000 during the past five years, and last year in the Nova Scotia Sanatorium patients paid \$5.00 per week, the province meeting the deficit.

Other Special Provincial Measures.—In Saskatchewan, in localities where no hospitals exist, the province provides destitute cases with food-supplies. In Ontario no sanatorium may be built within 150 yards of any residence. Quebec has enacted model legislation regarding

construction of habitations, respecting factories, and educational institutions. In 1909 a Royal Commission on Tuberculosis was named, and their report will doubtless guide further legislative action.

Municipal and Local Measures against Tuberculosis.

These need not be fully detailed. A few cities and towns have adopted notification—some compulsory, others voluntary. Most of the large cities and towns have anti-spitting ordinances, while the street railway companies, almost without exception, have notices



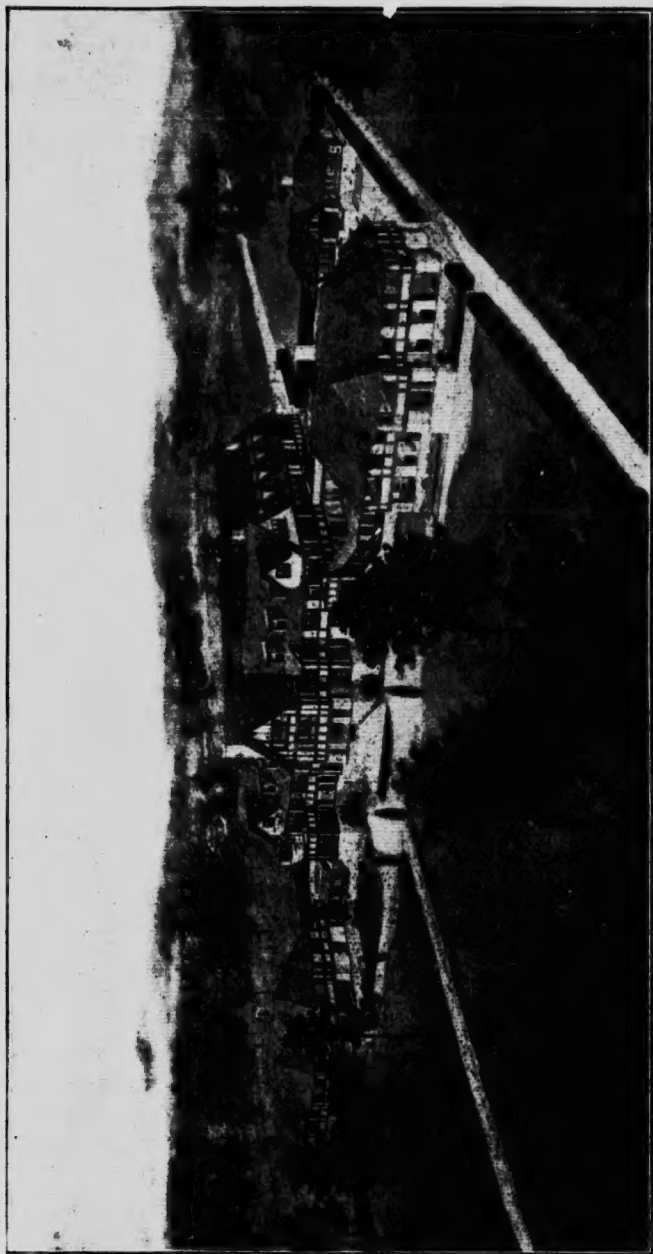
THE MOUNTAIN SANATORIUM: MEN'S SHACK.

Accommodating ten patients. Cost \$800. In the centre of men's and women's shacks is a heated dressing-room, with lockers and bath.

posted. The Government railways have similar enactments, with a maximum penalty of twenty dollars. The Board of Railway Commissioners have issued instructions to all railways in Canada regarding spitting in carriages and railway-stations, also ordering regular and special disinfection of sleeping-cars. The proper cleansing, heating and ventilation of all passenger-cars are also ordered.

The Milk-Supply and Tuberculosis.

For nearly two years the Milk Commission of the Canadian Medical Association have been endeavouring to increase interest in the larger centres in a purer milk-supply. Local sub-commissions



THE LAURENTIAN SANATORIUM, STE. AGATHE DES MONTS, P.Q.

Erected by the Laurentian Society. Cost about \$120,000.

have been appointed, and all are working toward the desired end. At the present session of the Ontario Legislature, the Milk Commission appointed by the Government of Ontario has brought in its report with its recommendations regarding the milk-supply of the province. The cities of Quebec, Moncton (N.B.), Portage la Prairie, Winnipeg (Manitoba), Regina (Saskatchewan), Calgary, Edmonton (Alberta), demand compulsory tuberculin tests in all herds supplying milk to the city. British Columbia, Manitoba, and Quebec have legislation permitting municipalities to adopt such by-laws. A portion of the milk-supply of the cities of Ottawa and Toronto is pasteurized.

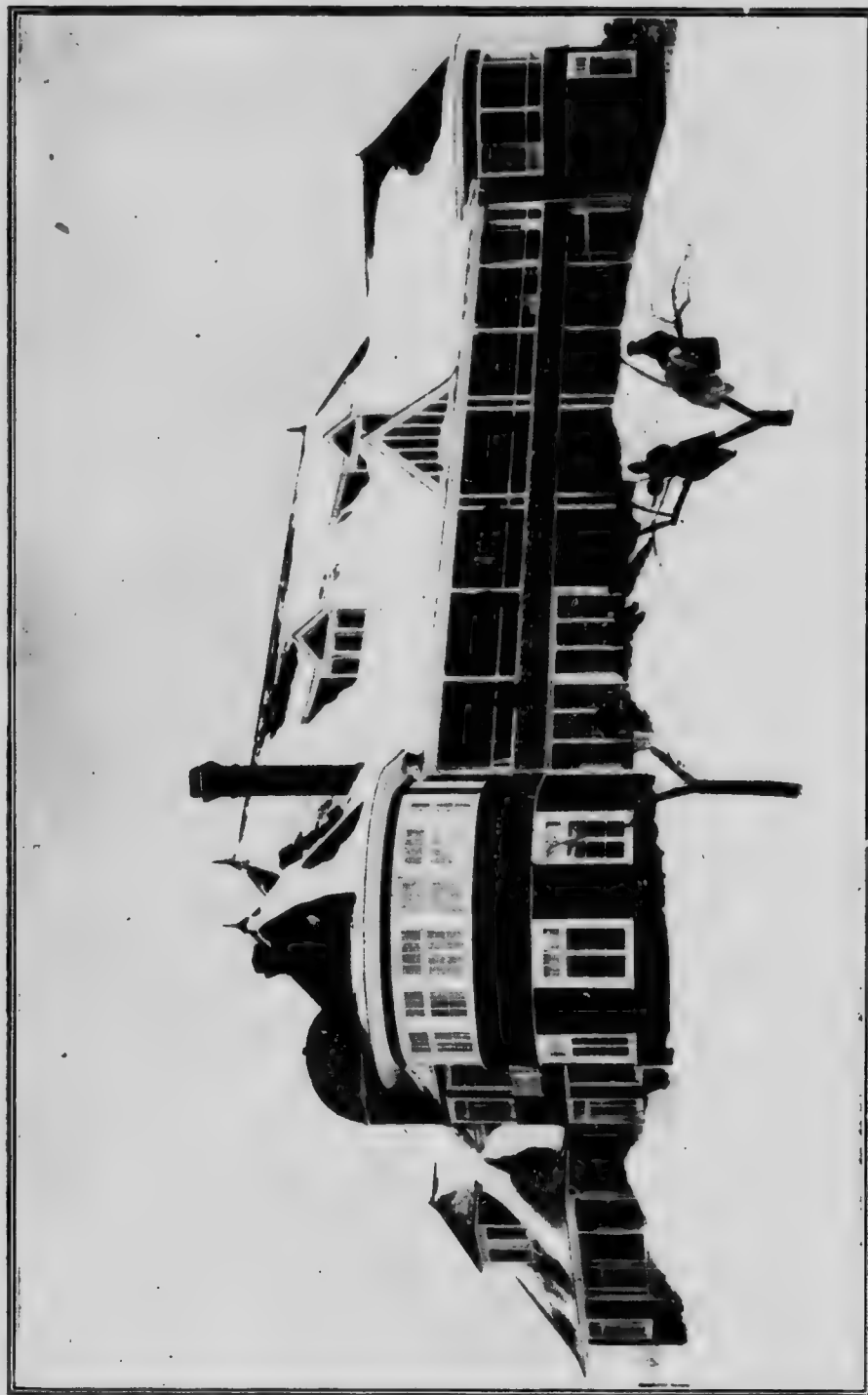
Tuberculosis in Children.

This question has received special attention in the surgical wards of the Hospital for Sick Children and the Lakeside Home, Toronto, when the children spend the warmer months on broad verandas. In Montreal the Children's Memorial Hospital deals largely with cases of tuberculosis, and has special pavilions and porches for open-air treatment. The Toronto Free Hospital for Consumptives has a special ward for children with pulmonary tuberculosis, and the Heather Club, Toronto, has a visiting nurse for work amongst tuberculous children.

Anti-Tuberculosis Associations in Canada.

The central organization is the Canadian Association for Prevention of Tuberculosis, with its chief office at Ottawa. Affiliated with this are the provincial associations of British Columbia, New Brunswick, Prince Edward Island. The other provinces have no general associations, but have most of their local associations in direct affiliation—in Ontario, seventeen; in Quebec, four; in Nova Scotia, twelve; while others are being organized this year by Dr. George D. Porter, the Associate-Secretary of the Association. Through the greater part of the year this energetic physician is moving about in the different provinces, aiding the local associations already formed and assisting to create local interest in other centres. Many of the newly-formed leagues are actively at work studying how best to meet local conditions, and instituting relief measures. The New Brunswick Association also have a paid travelling lecturer and organizer.

The Canadian Association is endeavouring mainly to work along lines of education, at the same time suggesting legislation when it may seem desirable, and assisting all the various agencies which have been instituted and which may request aid from the central organization.



THE PROVINCIAL SANATORIUM, KENTVILLE, NOVA SCOTIA: WINTER SCENE.

Tuberculosis Exhibitions.

In 1906, at the time of the meeting of the British Medical Association in Toronto, the travelling exhibit of the National Association of the United States was opened for two weeks, brought to Toronto by the National Sanitarium Association. The exhibit was visited by 13,000 people. Following this, Dr. C. A. Hodgetts, the Secretary of the Provincial Board of Health of Ontario, brought together a splendid exhibit, known now as the Ontario Government Tuberculosis



HAMILTON HEALTH ASSOCIATION : DAY DISPENSARY.

Headquarters for city dispensary and visiting nurse.

Exhibit, which has visited many of the towns of Ontario, and has been repeatedly asked for in other provinces and the adjoining States. For six weeks in the autumn it appears at the rural fairs.

In November and December, 1908, following close upon the International Congress at Washington, an exhibit was organized in Montreal through the Montreal League, assisted by practically all the philanthropic organizations in the city, both Roman Catholic and Protestant. For two weeks it was open, visited by all the school and convent children of the city. The results of the exhibition can

scarcely be measured. It was attended by over 50,000 people, and marks a great increase in interest in anti-tuberculosis work in Montreal.

The Christmas Tuberculosis Stamp Movement.

In 1908 this device was adopted by the British Columbia Association, the Hamilton Health Association, and the Muskoka Free Hospital. Last year the Halifax League and others also used it as a means of increasing interest in their work and to secure funds, in all cases with substantial results.

Sanatoria and Other Institutions for Consumptives and Tuberculous Subjects.

The first association to build a sanatorium in Canada was the National Sanitarium Association, organized in 1896, which opened the Muskoka Cottage Sanatorium in 1897. Later it built the Muskoka Free Hospital for Consumptives, which was opened in 1902. In ten years this Association has had over 3,000 patients under treatment.

The first dispensary in Canada was that of the Montreal League, opened in November, 1904, which has now become the Royal Edward Institute, with splendidly-equipped quarters, the gift of Colonel Jeffery H. Burland and his sisters, and is the centre of the movement in Montreal.

The dispensary and the visiting nurse are becoming more and more recognized as factors of prime importance in the combat, and it is a hopeful sign to see the number of these steadily increasing.

In many cities the local organizations are moving in the establishment of dispensaries, maintenance of visiting nurses, and in the provision of food, clothing, and sanitary supplies for poor patients. Where sanatoriums and special hospitals are not available, tents or other conveniences for outdoor living are supplied. That there is a healthy growing interest in the work throughout the Dominion will be seen by a comparison of the subjoined list of special hospitals, sanatoriums, and dispensaries, with other lists published by the writer in 1906¹ and in 1908.²

Dispensaries for Tuberculous Patients.

These have been started in many districts, and are doing good work. The following are the principal ones :

1. *The Royal Edward Institute*, Montreal, P.Q., formerly the dispensary of the Montreal League for the Prevention of Tuberculosis. Opened six days weekly. Verandas and roof garden, serving as day camp for patients in attendance. Established in November, 1904.

¹ *British Medical Journal*, p. 689, September 22, 1906.

² Transactions of the International Congress on Tuberculosis, Washington, vol. iv., p. 135, 1908.

2. *Tuberculosis Dispensary and Clinic*, Toronto General Hospital, Toronto, Ontario. Opened two days weekly. Established January, 1906.
3. *Tuberculosis Dispensary and Clinic*, St. Michael's Hospital, Toronto, Ontario. Opened one day weekly. Established January, 1909.
4. *Tuberculosis Dispensary of Hamilton Health Association*, Hamilton, Ontario. Opened two days weekly. Established in 1906.
5. *The May Court Tuberculosis Dispensary*, Ottawa, Ontario. Opened daily. Established June, 1908.



THE SOUTHAM HOME FOR CHRONIC TUBERCULOUS CASES.
Accommodating twenty-four patients. Located on City Hospital grounds.

6. *The Winnipeg Dispensary*, conducted at Winnipeg General Hospital by the Winnipeg Anti-Tuberculosis Association. Opened daily. Established 1909.
7. *The Anti-Tuberculosis Society for King's and Queen's County* conducts a dispensary at Charlottetown, P.E.I. Established 1909.
8. *Dispensary of the St. John Anti-Tuberculosis Association*, St. John, N.B. Established, 1910.

Visiting Nurses for Tuberculous Cases.

One or more visiting nurses are connected with the work of the various dispensaries, some of whom are maintained by the dispensary, others by a different organization. For example, the Victorian Order

of Nurses work in conjunction with the Royal Edward Institute, Montreal, while the visiting nurse of the Toronto dispensaries is paid by the city of Toronto. In addition to the visiting nurses attached to the dispensaries listed above, the following associations have at least one :

The Colchester Association for Prevention of Tuberculosis, Truro, N.S.

The Halifax League for Prevention of Tuberculosis, Halifax, N.S.

The Toronto Free Hospital for Consumptives, Toronto, Ontario.

The Heather Club, Hospital for Sick Children, Toronto, Ontario.

Space will not permit even a short description of the work being done by the various associations and leagues, nor of the equipment and the results of treatment in the various sanatoriums, but the list of institutions will convey some idea of the start which has been made in the provision of beds. There is, however, a general feeling throughout the Dominion that, to wage a winning warfare, prevention in the home is more important than institutional treatment; and, lacking sufficient beds for all, the proper care of the patient in his home, with the avoidance of infection, forms the greater part of the work before us. This means perfecting local organization, and it is toward this end that the Canadian Association is bending its energies.

LIST OF SPECIAL HOSPITALS AND SANATORIUMS IN CANADA.

(Where conducted by an Association the name appears in brackets.)

ONTARIO.

Muskoka Cottage Sanatorium, Gravenhurst : 75 beds ; \$12 to \$18 weekly. For incipient cases. (The National Sanitarium Association.)

Muskoka Free Hospital for Consumptives, Gravenhurst : 140 beds ; patient pays in part, if able. Dr. W. B. Kendall, Physician-in-charge to both institutions. (The National Sanitarium Association.)

The Minnewaska, Gravenhurst : 25 beds ; \$8 to \$15 weekly. For incipient cases only. Dr. C. D. Parfitt, Resident Physician.

The Mountain Sanatorium, Hamilton : For incipient cases ; 35 beds, for Hamilton and Wentworth County. Dr. J. H. Holbrook, Physician-in-charge. (Hamilton Health Association.)

Toronto Free Hospital for Consumptives, Weston : 100 beds. For advanced and far-advanced cases, from City of Toronto. Patient pays in part, if able.

- The Sonnam Home*, on grounds of City Hospital, Hamilton, Ontario: For advanced cases; number of beds, 25. Admissions from city and county. Patients pay in part, if able. Dr. Walter F. Langrill, Superintendent. (Hamilton Health Association.)
- St. Catherines Sanatorium for Consumptives*, St. Catherines: For cases from city and county of Wentland. Patients pay in part, if able; 15 beds.
- The Lady Grey Hospital*, Ottawa: For advanced cases; 45 beds. Patients pay in part, if able. Opened February, 1900. (The Ottawa Anti-Tuberculosis Association.)
- King Edward Sanatorium for Consumptives*, Weston. A hospital for advanced cases; 25 beds; \$15 weekly; semi-private wards, \$8.00. Dr. W. J. Dobbie, Physician-in-charge.
- The Alexandra Hospital for Consumptives*, London, Ontario; 40 beds. For patients from city of London and county of Middlesex. Pay in part, if able. Dr. E. A. McCulloch, Superintendent. (London Health Association.)
- The Sir Oliver Mowat Memorial Hospital for Consumptives*, Kingston, Ontario; on grounds of the General Hospital; 25 beds. For patients from Kingston and county of Frontenac. Pay in part, if able. (To open July, 1910.)

Tents and other appliances for treatment of tuberculosis are in use in Galt, Stratford, Peterboro, Ottawa, Kingston, London. Some are in connection with the local general hospital (Kingston); others are provided by the municipality (Galt); others by local charitable associations (Ottawa, Stratford), or by private philanthropy (London).

QUEBEC.

- L'Hospital des Incurables*, Montreal: 20 beds for consumptives.
- The Grace Dart Home*, Montreal: For advanced cases; 20 beds. Organized in 1907 by private subscription.
- Brehmer Rest*, Ste. Agathe des Monts. For patients not definitely tuberculous. Patients pay \$4.00 weekly if able. Dr. A. J. Richer, Physician-in-charge.
- Lake Edward Sanatorium*, Lake Edward, Quebec: 30 beds. Individual wards with balconies. For incipient cases. Dr. W. E. Ainley, Superintendent.
- Laurentian Sanatorium*, Ste. Agathe des Monts, P.Q.: 50 beds. Incipient cases. Charges, \$7.50 per week. To open September 1, 1910. At present in temporary quarters. Dr. J. Roddick-Byers, Medical Director. (The Laurentian Society.)

NOVA SCOTIA.

Provincial Sanatorium, Kentville : 25 beds. For residents of the province. Patients pay \$5.00 weekly. Dr. Miller, Resident Physician.

Halifax League provides movable pavilions for the use of poor patients.

MANITOBA.

Manitoba Sanatorium for Consumptives, Ninette : For incipient cases ; 60 beds. Patients pay in part when able. For residents of Manitoba. Dr. D. A. Stewart, Superintendent.

Winnipeg City Hospital has a separate pavilion for advanced cases. 30 beds.

BRITISH COLUMBIA.

Tranquille Sanatorium, Kamloops : For incipient cases ; 30 beds. Free. Patients pay in part, if able. Admission at present limited to residents of British Columbia. Dr. James J. Thomson, Superintendent. (The British Columbia Anti-Tuberculosis Society.)

Riverside Cottage, Kamloops : For incipient cases ; 15 beds. Patients pay full rates. Dr. R. W. Irving, Attending Physician.

The following are to be classed as projected institutions :

ONTARIO.

Huron County will probably build a county sanatorium.

Brantford has plans under way for a sanatorium for the city, and for county of Brant.

Windsor is planning a local sanatorium.

NEW BRUNSWICK.

The Provincial Government have given assurances to the provincial society that they will assist in securing a sanatorium for the province. The site will be selected shortly.